

## ABSTRACT OF THE DISCLOSURE

A method and data structure are provided that enables name resolution via a hierarchical or chained lookup of delegated authorities independent of requiring IP addresses of the delegated authorities. In an embodiment, the method provides for lookups by first generating cryptographic keys associated with a namespace. An authority is created using one of the cryptographic keys. Next, the method provides for enabling namespaces to refer to the authority via requesting authorities associated with the namespaces to issue a peer-to-peer type resolution so that names of the namespaces resolve to the authority. For other desired namespaces, the method provides for issuing a resolution that names the authority and names associated with the other namespaces to resolve to the other authorities. For services, the authority and a service name are published to receive and end result such as arbitrary data, an IP address, a protocol name or a port.